Abstract of the Invention

The invention is directed to methods involving rewetting of expandable polymers with a wettable liquid to allow for enhanced expansion at or below room temperature without breakage, and in some cases, allows one to achieve a greater expansion ratio than that allowed at elevated temperatures using known methods. The wettable liquid can be formed of a drug and/or an agent, such that the resulting polymer contains and emits the drug upon positioning at a target location of a patient body. The expandable polymer can also have the drug or agent added to its structure at a polymer resin preparation stage, through use of an aqueous solution mixed with one or more fluoropolymers, or in a mixing stage. The present invention also allows one to achieve material with unique properties and handling characteristics. These properties included decreased material thickness, increased density, an altered node/fibril morphology, and a more consistent web in the case of flat material. This method is not limited to room temperature conditions and can be applied whenever the expandable polymer material is wet with a wettable liquid, and the expansion is performed at a temperature preferably below the vaporization or boiling points of that liquid.